

Homework 0

Karina L. Bellavia

How do you solve a quadratic equation at $x = 0$?

Introduction

The basic formula for the quadratic formula is:

$$f(x) = ax^2 + bx + c$$

In our case, our numerical coefficients are:

$$a = 1$$

$$b = 3$$

$$c = 2$$

We can now fill in the quadratic equation:

$$f(x) = 1x^2 + 3x + 2$$

Step 1: Solve for the discriminant

First, we must calculate the discriminant. We can do this by using the formula:

$$b^2 - 4ac$$

A positive discriminant indicates there are 2 real solutions, a discriminant of zero indicates there is 1 real solution, and a negative discriminant indicates there are zero real solutions.

Step 2: Solve!

If we have a positive discriminant or a discriminant equal to zero, we can solve using the quadratic formula:

$$x = -b \pm \frac{\sqrt{b^2 - 4ac}}{2a}$$

If the discriminant equals zero, we have two identical solutions. Therefore, it does not matter whether we we

Now, let's solve our quadratic equation.

Here is the discriminant for our equation: 1

Given our discriminant, there are two solutions! The solutions are: -1, -2

Graph of the Quadratic Equation

$$f(x) = 1x^2 + 3x + 2$$

